

MATROSOV, P. S.

Geology

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Matrosov, P. S.

Discovery of Eifelian fauna at the northern slopes of the western Tanu-Ola mountain range

Dokl. AN SSSR, 96, Ed. 4, page 806, June 1954

Traces of Eifelian fauna, discovered at the northern slopes of the Tanu-Ola mountain range (Tuva region), were identified. It was established that the Eifelian deposits in Western Tuva cover a large area of the mountainous range. The zone of Eifelian deposits is outlined.

All-Union Scientific-Research Geological Institute

Academician D. V. Malivkin, March 9, 1954

DANZAN HUTOCHI ; MATROSOV, P.S.

Stratigraphy and facies of Devonian sediments in the northwestern
part of the Mongolian Altai. Sov. geol. 2 no.6:31-37 Je '59.
(MIRA 12:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut
(VSEGEI) i Komitet nauk Mongol'skoy Narodnoy Respubliki.
(Altai Mountains--Geology, Stratigraphic)

MATROSOV, P.S.

Basic stratigraphic features of Devonian sediments in the Barun-
Khuray Depression. Sov. geol. 3 no.4:123-127 Apr '60.

(NIRA 13:11)

(Barun-Khuray Depression (Western Mongolia)—Geology, Stratigraphic)

AMANTOV, V.A.; MATROSOV, P.S.

Basic characteristics of the geotectonic development and distribution of Mongolian structures in the systems of the Altai-Sayan and Mongolian-Amur fold areas. Trudy VSEGEI 58:183-206 '61.

(MIRA 15:5)

(Siberia—Geology, Structural) (Mongolia—Geology, Structural)

AMANTOV, V.A.; DANZAN BUTOCHI; MATROSOV, P.S.

Development of geological structures of western Mongolia. Izv.
AN SSSR.Ser.geol. 27 no.8:21-35 Ag '62. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut
i Mongol'skoye geolog-razvedochnoye upravleniye, Ulan-Bator.
(Mongolia--Geology, Structural)

AMANTOV, V.A.; MATROSOV, P.S.

Granitoids of southwestern Mongolia. Trudy VSEGEI 100:109-144
'63. (MIRA 17:3)

MATROSOV, P. S.; SINITSYN, V. M.

A new land mark in the geological study of Mongolia.
Izv. AN SSSR. Ser. geol. 29 no. 1:110-111 Ja '64. (MIRA 17:5)

MATROSOV, Sergey

Where are you, Shura? Rabotnitsa. 40 no.6:10-11 Je '62.

(MIRA 16:3)

1. Byvshiy zamestitel' komandira 18-go gvardeyskogo krasnoznamenennogo
Bogdanovskogo artilleriyiskogo polka.

(World War, 1939-1945--Women's work)

MATROSOV, S.A., kand. med. nauk [deceased]

Local decalcination and its use in the treatment of chronic ossifying arthrosis. Vest. khir. 91 no.11:94-98 N '63. (MIRA 17:12)

1. Iz kliniki obshchey khirurgii (zav. - prof. V.I.Korkhov) Leningradskogo pediatricheskogo meditsinskogo instituta na baze bol'nitsy imeni OGPU.

MATROSOV, V. M., Cand of Tech Sci — (diss) "Certain Problems of the Stability Hygroscopic Systems," Kazan', 1959, 11 pp (Kazan' Aviation Institute) (KL, 5-60, 126)

MATROSOV, V.M.; KUZ'MIN, P.A., doktor fiz.-matem.nauk, otv.red.;
YEVGRAFOVA, L.N., otv.za vypusk

[Stability of gyroscopic systems] K voprosu ustoychivosti
giroskopicheskikh sistem. Kazan', 1959. 23 p. (Kazan.
Aviatsionnyi institut. Trudy, vol.49) (MIRA 14:2)
(Gyroscope)

S/124/61/000/011/008/046
D237/D305

13-2520

AUTHOR:

Matrosov, V.M.

TITLE:

On stability problems of dissipative gyroscopic systems

PERIODICAL:

Referativnyy zhurnal, Mekhanika, no. 11, 1961, 15, abstract 11A122 (Tr. Kazansk. aviats. in-ta, 1959, 45, 63 - 76)

TEXT: A mechanical system is considered with n degrees of freedom, acted upon by gyroscopic and dissipative (with full dissipation) forces only. For the case when equations of motion have constant coefficients, D.R. Markin proved the theorem on stability of trivial solution, $q_1 = q_2 = \dots = q_n = 0$, $\dot{q}_1 = \dot{q}_2 = \dots = \dot{q}_n = 0$. ✓
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Here a theorem is proved which is a generalization of the above and which refers to the case when coefficients of the equations may be dependent on coordinates q_1, \dots, q_n and some parameters. An application of this theorem investigation of the stability of mechanical

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On stability problems of ...

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systems containing gyroscopes, is shown. [Abstractor's note: Complete translation].

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Card 2/2

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S/040/60/024/005/003/028
C111/C222

13.2510

AUTHOR: Matrosov, V.M. (Kazan')

TITLE: On the Stability of Gyroscopic Stabilizers

PERIODICAL: Prikladnaya matematika i mekhanika, 1960, Vol. 24, No.5,
pp. 802-808

TEXT: Let q_1, \dots, q_n be generalized coordinates of the system; let q_{m+1}, \dots, q_n be the rotation angles of the imbedding plate, the suspension frames around the stabilizing axes; the q_1, \dots, q_m ($\frac{n}{2} \leq m \leq n$) contain the rotation angles of the gyroscope casings q_1, \dots, q_1 ; $l = n - m$. Let the moments of the servos around the stabilizing axes be holomorphic functions of $q_1, \dots, q_1, \dot{q}_1, \dots, \dot{q}_n$:

$$M_k = - \sum_{j=1}^l c_{kj} q_j - \sum_{j=1}^n b''_{kj} \dot{q}_j + M'_k(q_1, \dots, q_1, \dot{q}_1, \dots, \dot{q}_n)$$

($k = m+1, \dots, n$),

where c_{kj} , b''_{kj} are constants, M'_k are nonlinearities. On the system

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On the Stability of Gyroscopic Stabilizers

there act still dissipative forces with the scattering function R being a holomorphic function of the $q_1, \dots, q_n, \dot{q}_1, \dots, \dot{q}_n$ and

beginning with $R^{(2)} = \frac{1}{2} \sum_{k,j=1}^n b_{kj} \dot{q}_k \dot{q}_j$.

Then the motion equations of the gyroscopic stabilizer read:

$$\begin{aligned} \frac{dq_k}{dt} &= \dot{q}_k, \quad \frac{d}{dt} \left(\frac{\partial T}{\partial \dot{q}_k} \right) - \frac{\partial T}{\partial q_k} = - \sum_{j=1}^n (g_{kj} + b_{kj}) \dot{q}_j - \frac{\partial (R - R^{(2)})}{\partial \dot{q}_k} \\ &\quad (k = 1, \dots, m) \\ \frac{dq_k}{dt} &= \dot{q}_k, \quad \frac{d}{dt} \left(\frac{\partial T}{\partial \dot{q}_k} \right) - \frac{\partial T}{\partial q_k} = - \sum_{j=1}^n (g_{kj} + b_{kj} + b_{kj}') \dot{q}_j - \\ &\quad - \sum_{j=1}^l c_{kj} q_j + M_k' - \frac{\partial (R - R^{(2)})}{\partial \dot{q}_k} \quad (k = m+1, \dots, n) \\ T &= \frac{1}{2} \sum_{k,j=1}^n a_{kj} \dot{q}_k \dot{q}_j \quad (a_{kj} = a_{jk}) \end{aligned} \quad (1.1)$$

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On the Stability of Gyroscopic Stabilizers

Here T is a quadratic form of the velocities being positive definite for $q_1 = \dots = q_n = 0$; the $a_{kj}, g_{kj} = -g_{jk}$ are holomorphic in q_1, \dots, q_n , where

$$a_{kj}(0, \dots, 0) = a_{kj}^0, \quad g_{kj}(0, \dots, 0) = g_{kj}^0.$$

The author investigates the stability of the undisturbed motion

$$(1.2) \quad q_1 = 0, \dots, q_n = 0, \quad \dot{q}_1 = 0, \dots, \dot{q}_n = 0.$$

Theorem 1: If the roots of the equation

$$(1.4) \quad \begin{vmatrix} \|a_{kj}^0 \lambda^2 + (g_{kj}^0 + b_{kj})\lambda\| & \|a_{kj}^0 \lambda + g_{kj}^0 + b_{kj}\| \\ \dots & \dots \\ \|a_{kj}^0 \lambda^2 + (g_{kj}^0 + b_{kj} + b_{kj}^{\prime\prime})\lambda + c_{kj}\| & \|a_{kj}^0 \lambda + g_{kj}^0 + b_{kj} + b_{kj}^{\prime\prime}\| \end{vmatrix} = 0$$

have negative real parts:

$$(1.5) \quad \operatorname{Re} \lambda_k < 0 \quad (k=1, \dots, n+1)$$

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On the Stability of Gyroscopic Stabilizers

then the undisturbed motion (1.2) of the system (1.1) with respect to $q_1, \dots, q_n, \dot{q}_1, \dots, \dot{q}_n$ is stable. Every disturbed motion approximates asymptotically one of the motions

$$(1.6) \quad \dot{q}_1 = 0, \dots, \dot{q}_n = 0, \quad q_1 = 0, \dots, q_1 = 0,$$

$$q_{1+1} = 0_{1+1}, \dots, q_n = 0_n.$$

Considering in (1.1) besides the disturbances caused by imbalance, excentricity etc. then still certain parameters a_j must be introduced.

Theorem 2: If (1.5) is satisfied then the undisturbed motion

$$q_1 = 0, \dots, q_n = 0 \quad \dot{q}_1 = 0, \dots, \dot{q}_n = 0$$

$$a_1 = \alpha_1, \dots, a_i = \alpha_i, \quad a_{i+1} = 0, \dots, a_{i+1} = 0$$

for parameter disturbances is stable with respect to $q_1, \dots, q_n, \dot{q}_1, \dots, \dot{q}_n$.

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On the Stability of Gyroscopic Stabilizers

Every disturbed motion tends asymptotically to one of the motions

$$\begin{aligned} q_1 = 0, \dots, q_n = 0, \quad q_{l+1} = c_{l+1}, \dots, q_n = c_n, \\ (1.8) \quad q_k = v_k(a_1, \dots, a_{i+1}, c_{l+1}, \dots, c_n) \quad (k=1, \dots, l). \end{aligned}$$

As an example the author considers a biaxial imbedding plate stabilized by two gyroscopes and by motors regulated by them (cf. (Ref 7)). It is shown that for a stopped servomotor every equilibrium position for parameter disturbances caused by an imbalance of the imbedding or of the frame, is unstable

There is 1 figure and 11 references: 10 Soviet and 1 American.

[Abstracter's note: (Ref.7) is a paper of N.T.Kuzovkov in Izv AN SSSR, OTN, 1958, No.1]

SUBMITTED: March 16, 1960

Card 5/5

1-1432-44 INT(4)/INT(1)/INT(4)/INT(2)-1/INT(4) 10/10

ACQUISITION NO: A75023183

08/2529/62/000/071/0012/0035

Author: Matrosov, V. M. 4/55

9, 44, 55

44
341

TITLE: On the problem of stability of gyroscopic systems on a moving base

SOURCE: Kavan. Aviatseyonny Institut. Trudy, No. 71, 1962. Matematika i Mekhanika, 12-75

TOPIC TAGS: gyroscope, gyro-stabilized platform, Lagrange equation, Euler equation

ABSTRACT: The stability of gyroscopic systems attached to a moving base is studied. A number of symmetric gyroscopes holomorphically constrained to remain attached to a moving base rotate with constant angular velocity. The base moves in some specified regular fashion. The simplest case occurs when the base is motionless or in equilibrium in the absence of the gyroscopes. This is relevant to the problem of a gyro-stabilizer on a moving vessel which does not pitch or roll. Lyapunov's second method is applied to the Euler-Lagrange equations to investigate the stability of the motion. Stability for three general classes of problems is investigated: first, that in which small external forces must be continually applied to maintain the motion of the base; second, when the motion of the base is partly conservative and partly dissipative; and third, that in

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1. 2532-004

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which the motion of the base is produced by oscillatory as well as "secular" forces. The results are used to discuss two simple examples: a damped mathematical pendulum oscillating in a vertical plane, and a "floating" Foucault pendulum (possessing two degrees of freedom). Orig. art. has: 25 formulas.

ASSOCIATION: Kazan Aviatseyonny Institut (Kazan Aviation Institute)

REMITTED: 21 Jan 61

RECL: 00

SUB CODE: ME, MA

NO REF NOY: 004

OTHER: 000

S/040/62/026/005/007/016
D234/D308

AUTHOR: Matrosov, V. M. (Kazan')
TITLE: On the stability of motion
PERIODICAL: Prikladnaya matematika i mekhanika, v. 26, no. 5, 1962,
885-895
TEXT: The author considers the equations of disturbed motion

$$\frac{dx_i}{dt} = X_i(x_1, \dots, x_n, t) \quad (i = 1, \dots, n) \quad (1.1)$$

the functions X_i being subject to certain limitations, and Lyapunov's functions $V(x, t)$, $W(x, t)$, which are real and continuous together with their time derivatives, also functions $V^*(x)$, $V'(x)$. Seven theorems are proved: 1) If V is definite positive and admits an infinitely small upper limit, $\dot{V} \leq V^* \leq 0$, W is bounded and $W \neq 0$ definitely in the set $E(V^* = 0)$ (i.e. the set of points x for which

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On the stability of motion.

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$v^* = 0$), then the disturbed motion (1.1) is asymptotically stable. 2) If V is definite positive, $\dot{V} \leq 0$ and the partial derivatives of V with respect to x_s and t up to the second order are continuous and bounded, W is bounded and $\dot{W} \neq 0$ definitely in $E_t(\dot{V} = 0)$ (i.e. the set where $\dot{V} = 0$ for a given t), then the undisturbed motion of the system is asymptotically stable. 3) If V is definite positive and admits an infinitely small upper limit, $V \rightarrow 0$; in every domain $t \geq 0, \alpha < \|x\| < H, \dot{V} \leq \varphi_\alpha(t)V^*, V^* \leq 0, \varphi_\alpha(t)$ being continuous, non-negative and the integral of φ_α along any infinite system of closed non-intersecting sections of the semiaxis $(0, \infty)$ of equal length being infinite. W is bounded and $\dot{W} \neq 0$ rigorously in $E(V^* = 0)$, the undisturbed motion of the system is asymptotically stable. 4) Under the same conditions as in theorem 2, except that $\dot{W} \neq 0$ rigorously in the sets $E_t(\dot{V} = 0)$, the undisturbed motion is asymptotically stable. 5) Under the conditions of theorem 3, except that W admits an upper limit, infinitely small in the set $E(V^* = 0)$ and $\dot{W} \neq 0$

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definitely in the same set, the undisturbed motion of the system is asymptotically stable. 6) If V admits an infinitely small upper limit and for any $t \geq 0$ there are points x lying in an arbitrarily small domain of undisturbed motion and having $V > 0$; $V \geq 0$ and in every domain $t \geq 0, \alpha < \|x\| < A < H, V \geq \varphi_\alpha(t)V', V' \geq 0, W$ is bounded and $W \neq 0$ rigorously in $E(V' = 0)$, then the undisturbed motion of the system is unstable. 7) Under the condition of theorem 6 referring to V , if $V \geq 0$ and the partial derivatives of V are continuous and bounded as in theorem 2, W and \dot{W} being as in theorem 4, then the undisturbed motion of the system is unstable. The author considers applications of these theorems to the motion of a symmetrical heavy solid body with one fixed point in the presence of resistance of the medium and a non-stationary mechanical system, under the action of potential gyroscopic and dissipative forces (as examples). The author acknowledges the assistance of P. A. Kuz'min.

SUBMITTED: December 21, 1961

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S/040/62/026/006/001/015
D234/D308

AUTHOR: Matrosov, V.M. (Kazan')

TITLE: On the theory of stability of motion

PERIODICAL: Prikladnaya matematika i mekhanika, v. 26, no. 6, 1962,
992 - 1002

TEXT: The author attempts to use simultaneously several functions V , each satisfying less rigorous conditions than in Lyapunov's second method. Chaplygin's theory of differential inequalities and a theorem of T. Ważewski (Ann. de la Soc. Pol. de Math. 1950, 23). Two general theorems are proved and a criterion of stability of instability is deduced for a function $V(x, t)$ whose k -th derivative is not larger than $f(V, v^{(1)}, \dots, v^{(k-1)}, t)$. For the case of a linear f and $k = 2$ the following theorems are proved: 1) If $V(x, t)$ is positive definite and $v^{(2)}$ is not larger than $p(t)v^{(1)}$, where $p(t)$ satisfies

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$$\int_{t_0}^{\infty} \exp \int_{t_0}^t p(\tau) d\tau dt < \infty \quad (3.1)$$

then the undisturbed motion $x \equiv 0$ of the system

$$\frac{dx_i}{dt} = X_i(x_1, \dots, x_n, t) \quad (i = 1, \dots, n) \quad (1.1)$$

is stable. 2) If V is bounded, $v^{(2)} \geq aV + 2bV^{(1)}$, a, b are constants, $b \geq 0$ if $a = 0$, and $(\sqrt{b^2 + a} - b)V + v^{(1)}$ can be positive for any small $\|x\|$ and any $t > 0$, then the undisturbed motion of the system (1.1) is unstable. 3) If V is bounded, V and $v^{(1)}$ can be positive at the same time for any small $\|x\|$ and $t \geq 0$ and $v^{(2)} > 0$ when they are positive, then the undisturbed motion of the system (1.1) is unstable.

SUBMITTED: June 30, 1952

Card 2/2

MATROSOV, V.M. (Kazan')

"The development of the method of Lyapunov functions in the stability theory".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

AMINOV, M.Sh., red.; BOGOYAVLENSKIY, A.A., red.; KALININ, S.V.,
red.; KUZ'MIN, P A., red.; LUR'YE, A.I., red.;
MATROSOV, V.M., red.; RUMYANTSEV, V.V., red.;
SRETENSKIY, L.N., red.

[Proceedings of the interuniversity conference on the
applied theory of the stability of motion and on analytic
mechanics] Trudy Mezhvuzovskoi konferentsii po prikladnoi
teorii ustoychivosti dvizheniya i analiticheskoi mekhanike.
Kazan', Kazanskii aviatsionnyi in-t, 1964. 144 p.

(MIRA 18:12)

1. Mezhvuzovskaya nauchnaya konferentsiya po analiticheskoy
mekhanike i ustoychivosti dvizheniya, Kazan, 1962.

MATROSOV, V.M.

New method for directional lowering of the drilling stem into wells.
Razved.1 okh.nedr 23 no.8:52-54 Ag '57. (MIRA 10:11)

1. Tomskiy politekhnicheskii institut.
(Boring machinery)

14(5)

SOV/132-59-2-5/16

AUTHORS: Molchanov, V.I.; Matrosov, V.M.

TITLE: On the Choice of Initial Parameters for Vibration-Rotary Action Drilling Machines (K vyboru iskhodnykh parametrov buril'nykh mashin vibratsionno-vrashchatel'nogo deystviya)

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 2, pp 25 - 30 (USSR)

ABSTRACT: The article describes the results of six years of research conducted by a group of scientists of the Kafedra tekhniki razvedki (Department of Prospecting Technology) of the Tomsk Polytechnical Institute, on the creation of highly productive drilling rigs and the improvements of existing drilling processes. It was found by empirical and graphical computations that: 1) the volume of rock crumbled by one percussion depends on the angle of percussion and reaches its maximum at the angle of the most advantageous application of force (P); in addition to the angle of friction (φ); 2) the maximum efficiency of percussion-rotary and vibration-rotary drilling is obtained

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On the Choice of Initial Parameters for Vibration-Rotary Action
Drilling Machines

at such correlation of oscillation frequency with the rotation speed at which the direction of the percussion coincides with the angle ρ ; 3) the experimentally found values of the angle ρ permit the calculating of axial speed of the drilling bit at the moment of percussion at a given speed of the drill; 4) the rotary speed of the drill and the calculated axial speed of the bit are the initial parameters for the choice of the optimal drilling regime and for the construction of vibration-rotary drilling machines. The analytical and graphic computations are described in detail. The author mentions the following scientists who took part in this research: I.S. Mityushkin; G.I. Tolstykh; G.A. Kushnikov and V.I. Butov. There are 2 graphs and 1 set of graphs, 2 diagrams, 2 tables and 4 Soviet references.

ASSOCIATION: (SNIIGGIMS)

Card 2/2

MATROSOV, V.M.

Experimental studies on the vibration-rotary method for drilling
circular hole bottoms. Izv.vys.ucheb.zav.;geol.i razv. 3 no.2:
145-153 # '60. (MIRA 15:5)

1. Tomskiy politekhnicheskii institut.
(Boring)

MATROSOV, V. M.

Cand Tech Sci - (diss) "Study of a vibration-rotary method of boring shafts using circular cuts." Tomsk, 1961. 16 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov); 150 copies; price not given; (KL, 6-61 sup, 221)

L 25432-66 EPF(n)-2/EWT(1) WN

ACC NR: AT6007331

SOURCE CODE: UR/2529/63/000/080/0022/0033

AUTHOR: Matrosov, V. M.

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B+1

ORG: Kazan Aviation Institute (Kazanskii aviatseynyy institut)

TITLE: Theory of motion stability II

SOURCE: Kazan, Aviatseynyy institut. Trudy, no. 80, 1963. Matematika i mekhanika (Mathematics and mechanics), 22-33

TOPIC TAGS: motion stability, motion equation, Lipschitz condition, mathematic space, function, asymptotic property, integral equation, bounded function

ABSTRACT: Criteria of motion stability are obtained with the simultaneous use of several V functions. The criteria generalize the results of an earlier work by V. M. Matrosov (K teorii ustoychivosti dvizheniya. PMM, Vol. XXVI, No. 6, 1962). The requirements of stability of the auxiliary system are replaced by a requirement of quasi-stability in a certain sense. The following system of equations of perturbed motion is given:

$$\frac{dx_i}{dt} = X_i(x_1, \dots, x_n, t) \quad (i=1, \dots, n)$$

The perturbed motions are described by the set of functions

$$x(t, x_0, t_0) = \{x_1(t, x_0, t_0), \dots, x_n(t, x_0, t_0)\}$$

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which are defined and continuous for $(x, t) \in \mathbb{R}^n, t \in [t_0, \infty)$, and are continuously differentiable with respect to x as long as $\|x\| \leq \delta = \text{const} > 0$. It is proven that the asymptotic stability of unperturbed motion $x = 0$ of the given system is uniform with respect to t_0, t_1 . Vassarski's theorem is used to prove instability of unperturbed motion of the system. Orig. art. has: 17 formulas.

ISS CODE: 12/

ISSN DATE: 23-Jun-63/

ORIG REF: 006/

OTH REF: 003

L 29902-66 EWI(d) IJP(c)

ACC NR: AR5028209

SOURCE CODE: UR/0044/65/000/008/B043/B043

AUTHOR: Matrosov, V. M.

TITLE: Theory of motion stability. Part III.

SOURCE: Ref. sh. Matematika, Abs. 8B241

REF SOURCE: Tr. Mezhd. konferentsii po prikl. teorii ustoychivosti dvizheniya i analit. mekhan., 1962. Kazan', 1964, 103-109

TOPIC TAGS: motion stability, second order equation

ABSTRACT: The condition of stability and instability for systems of the second order and systems in the normal form were discussed. The second derivative of the Lyapunov function or some correlation of the right sides of the equations were used. V. Zubov

SUB CODE: 12/ SUBM DATE: none

Card 1/1 *cl*

UDC: 517.917

MATROSOV, V.M.; SPIRIDONOV, B.I.

Analysis of the operation of a hinge diverting device. Izv. vys.
ucheb. zav.; geol. i razv. 7 no.2:132-136 F'64. (MIRA 17:2)

1. Tomskiy politekhnicheskii institut.

SULAKSHIN, S.S.; MATROSOV, V.M.; SPIRIDONOV, B.I.

Controlled-angle drilling of exploratory boreholes in the
Ampalykskii deposit. Razved. i okh. nedr 30 no.2:30-33 P '64.
(MIRA 17:8)

1. Tomskiy politekhnicheskii institut.

KABACHNIK, M.I.; GILYAROV, V.A.; CHZHAN CHZHEN-DE[Chang Chông-tieh]-MATROSOV, Ye.I.

Problem of tautomerism of N-acylamidophosphates and N-acylamidophosphinates.
Izv.AN SSSR.Otd.khim.nauk no.9:1589-1599 S '62. (MIRA 15:10)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Phosphoramidic acid) (Phosphinamidic acid) (Tautomerism)

1.13.66 001(a)/001(a)/001(a) 25

RECEIVED NO: 07022077

001/002/001/001/1231/1236

001.002 + 001.715.1

AUTHOR: Bogdanov, Ye. I.; Gilyarov, V. A.; Kabanikh, N. I.

TITLE: About amide-imide tautomerism of N-phosphorylimidophosphates and phosphines

SOURCE: AN SSSR. Izvestiya. Seriya Khimicheskaya, no. 8, 1966, 1231-1236

TOPIC TERM: amide, imide, tautomerism, N-phosphorylimidophosphate, phosphine, IR spectroscopy

ABSTRACT: The amide-imide tautomerism of amides of acids of pentavalent phosphorus.



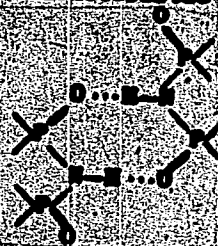
was investigated by IR spectroscopy. The IR absorption spectra of N-phosphorylimidophosphates and phosphines are shown in fig. 1 of the Enclosure. The IR absorption spectra of N-phosphorylimidophosphates and phosphines are shown in fig. 2 of the Enclosure. For the compounds in question, vibrational frequencies corre-

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1. 1131-66

ACCESSION NO: AF9022027

According to P-H group occur in the 1200-1300 cm^{-1} region and those corresponding to P-H group occur in the 1210-1230 cm^{-1} region. The IR spectra indicate an amide type structure of the N-phosphorylamidophosphates and phosphines. The phosphoryl group may form a strong hydrogen bond to the NH-groups and, thus, cause a strong shift of the band corresponding to N-H vibration toward wave numbers shorter than 1100 cm^{-1} . As a result, the absorption band characteristic for N-H vibration in N-phosphorylamidophosphates and phosphines,



occur at 2700 cm^{-1} . Orig. art. has: 2 figures, 2 tables.

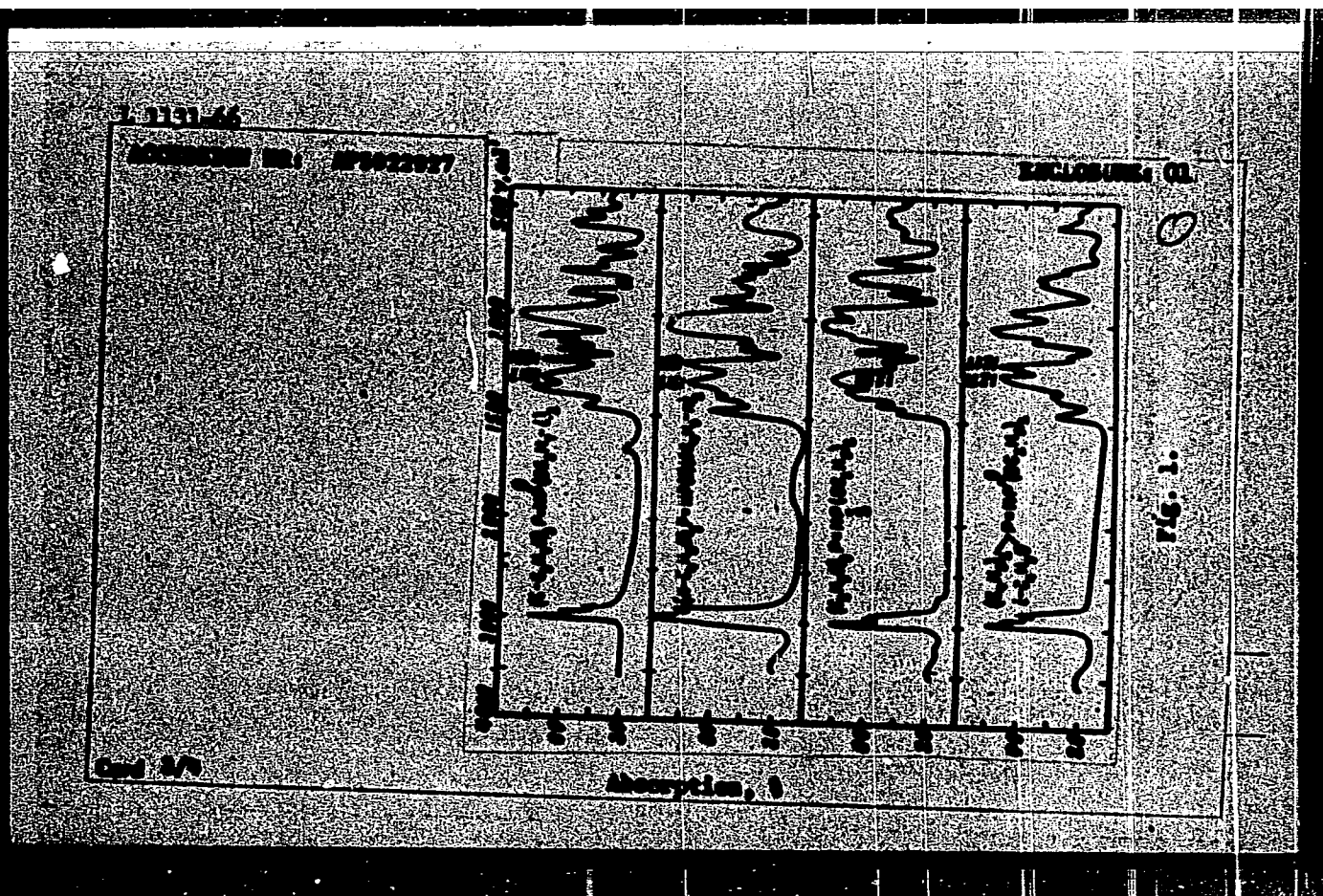
Author(s): Institut chemisch-physikalische experimentelle Physik, Institut für Physik (Department of Physical Chemical Experiments, Academy of Sciences, USSR)

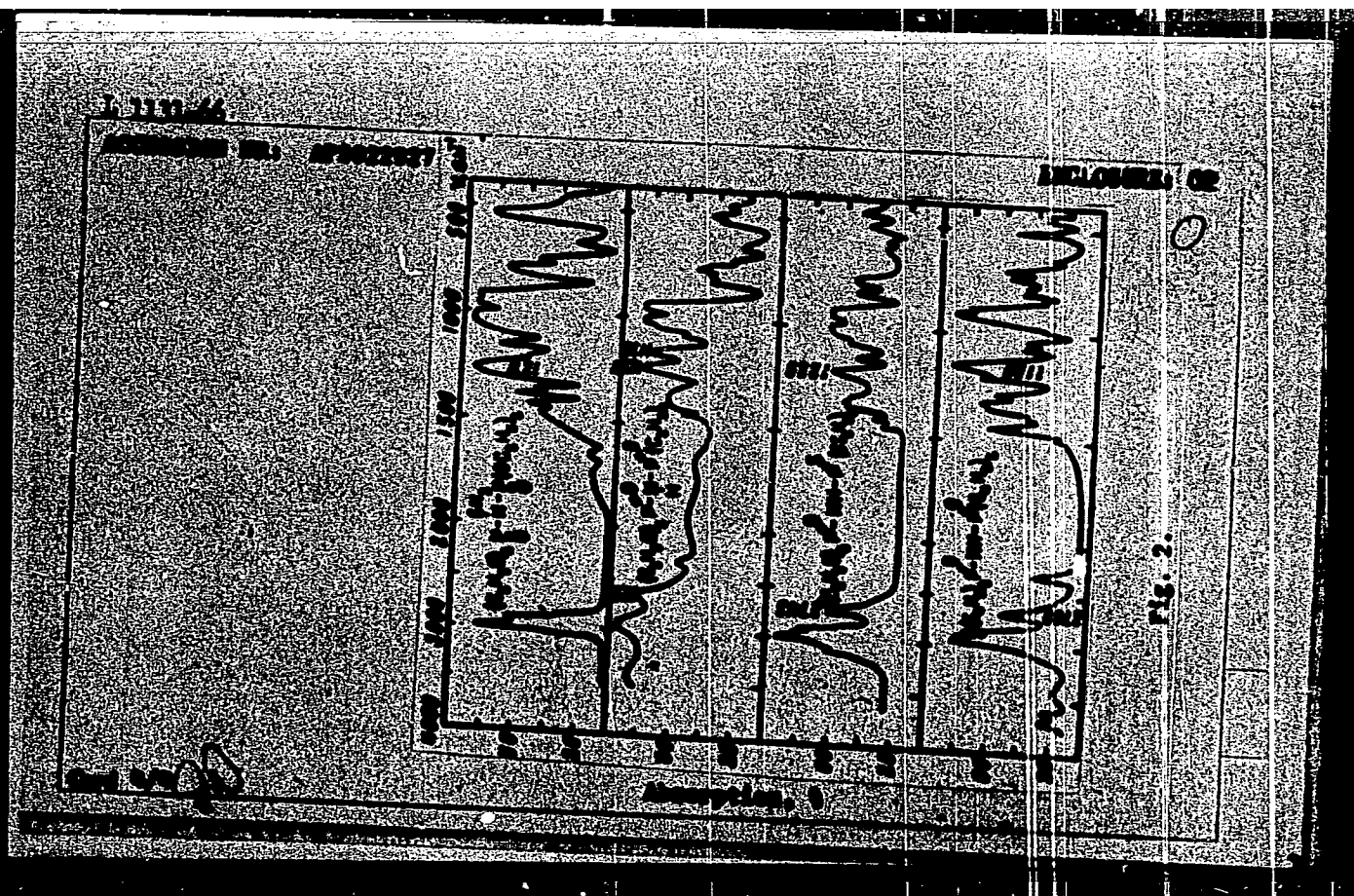
Journal: Izvestiya Akad. Nauk SSSR Ser. Khim. (Bull. Acad. Sci. USSR Div. Chem. Sci. Ser. Chem.)

Vol. 21, No. 1, 1978, pp. 1-4. 4 refs.

ENGLISH SUMMARY: The IR spectra of N-phosphorylamidophosphates and phosphines show a strong shift of the band corresponding to N-H vibration toward wave numbers shorter than 1100 cm^{-1} . As a result, the absorption band characteristic for N-H vibration in N-phosphorylamidophosphates and phosphines, occur at 2700 cm^{-1} .

Card 2/4





KABACHNIK, M.I.; MASTRYUKOVA, T.A.; MATROSOV, Ye.I.; FISHER, B.

Infrared spectra and structure of phosphorus monothioacids.
Zhur.strukt.khim. 6 no.5:690-698 S-O '65.

(MIRA 18:12)

1. Institut elementoorganicheskikh soedineniy AN SSSR. Submitted February 12, 1965.

ANDRIANOV, K.A.; MANEVICH, I.Ya.; BUSLAYEV, Yu.A.; MATROSOV, Ye.I.

Acid salts of methylphosphinic acid. Zhur. neorg. Khim. 11
no.3:596-600 Mr '65. (MIRA 18:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i
Institut obshchey i neorganicheskoy khimii imeni N.S.
Kurnakova /N SSSR.

1 28840-56 ENT(m)/EWP(j) RM

ACC NR: AF6018651

SOURCE CODE: UR/0020/65/162/002/0339/0342

AUTHOR: Kabanov, M. I. (Academician); Medved', T. Ya.; Mironov, Ye. I. 36
B

ORG: Institute of Organometal Compounds, AN SSSR (Institut elementoorganicheskikh soedineniy AN SSSR)

TITLE: Potassium and sodium salts of bis-diphenylphosphinyl-methane, and their reactions with aldehydes

JOURNAL: AN SSSR. Doklady, v. 163, no. 2, 1965, 339-342

INDEX TERM: potassium compound, sodium compound, organic salt, aldehyde, chemical reaction, IR spectrum

ABSTRACT: The authors had at their disposal bis-diphenylphosphinyl-methane (the dioxide of tetraphenylmethylenediphosphine), which they call "dioxide" and they investigated its ability to form sodium and potassium derivatives; separated the derivatives in analytically pure form, studied their infrared spectra, and their reactions with aldehydes. The changes in the infrared spectrum of dioxide when it forms salts corresponds to that of bis-dialkylphosphoryl-methane, diethylphosphorylaceton, and acetylaceton when they form salts. Reactions of dioxide salts with aldehydes was investigated with the potassium salt. They result in the formation of oxides of phosphines, containing beta-substituted vinyl groups, and the potassium salt of diphenylphosphinic acid. The reaction occurs both with aromatic and with aliphatic aldehydes. G. F. Dmitriyev assisted with the experiment. Orig. art. has: 1 figure, 4 formulas, and 1 table. /JPRS/

SUB CODE: 97 / SUBJ DATE: 28-may-65 / ORIG REF: 003 / JPRS REF: 007

L 33128-66 EWT(m)/ENP(j) RM SOURCE CODE: UR/0192/65/006/005/0691/0698
 ACC NR: AP6024164
 AUTHOR: Kabachnik, M. I.; Mastryukova, T. A.; Matrosov, Ye. I.; Fisher, B. 51
 ORG: Institute of Organoelemental Compounds, AN SSSR) Institut elementoorganiches-
 kikh soyedineniy AN SSSR) 13
 TITLE: Infrared spectra and structure of phosphorusmonothioacid salts
 SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 5, 1965, 691-698
 TOPIC TAGS: IR spectrum, phosphoric acid, organic phosphorus compound
 ABSTRACT: The infrared spectra of salts of diethylthiophosphoric
 and dimethylthiophosphoric acids were studied. It was shown that
 the anion of ammoniacal and alkali salts of these acids have a
 mesomeric structure with the distribution of ionic charge between
 the atoms of the triad. Salts of nonalkali metals of diethylthio-
 phosphoric acid evidently have an intracomplex structure. Depend-
 ing on the nature of the metal, the distribution of the bonds in
 the phosphorus moiety can approximate the thiolic (Cu, Ag, Zn, and
 Hg salts) or the thionic (Ca, Pb, and Mn salts) type. Salts of
 heavy metals of dimethylthiophosphinic acid also evidently are
 intracomplex in character, but their thionic character is more
 strongly pronounced. T. K. Nazarova and M. I. Volkova took part in the experi-
 mental phase of the work. The authors thank G. B. Shaltupier for his valuable advice
 during discussion of the work. Orig. art. has: 3 figures and 13 formulas. [JPRS]
 SUB CODE: 07 / SUBM DATE: 12Feb65 / ORIG REF: 017 / OTH REF: 015
 Cord 1/1BK UDC: 535.343
 0915 1753

I 34612-66 EWT(m)/EWP(1) RM

ACC NR: AP6026575

SOURCE CODE: UR/0192/65/006/006/0832/0836

AUTHOR: Matrosov, Ye. I.ORG: Institute of Elemento-organic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy)TITLE: Spectra and structure of salts of organophosphorus compounds. Salts containing a methinediphosphinic group

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 6, 1965, 832-836

TOPIC TAGS: organic phosphorus compound, anion, molecular structure, chemical bonding

ABSTRACT: Calculations are presented for frequencies, forms of oscillations, and partial derivatives with respect to oscillation frequencies for different parameters for three models of an anion containing a methinediphosphinic group. Comparison of calculated frequencies for these models with frequencies of oscillation of the sodium and potassium salts of bis-diphenylphosphinylmethane shows that salts containing the methinediphosphinic group have a symmetrical structure with equalized PO and PC bonds. This equality makes it possible to assume the formation of a single conjugated system of aromatic type bonds within the phosphoric pentade. The author thanks Academician M. I. Kabachnik and Professor L. S. Mayants for interest in the work and valuable comments. Orig. art. has: 2 tables. [JPRS: 36,455]

SUB CODE: 07 / SUBM DATE: 25Apr65 / ORIG REF: 004 / OTH REF: 006

Card 1/1

UDC: 541.65

L 05206-67 ENP(j)/EWT(m) RM

ACC NR: AP7000755

SOURCE CODE: UR/0192/66/007/003/0366/0369

MATROSOV, Ye. I., Institute of Organoelemental Compounds,
Academy of Sciences USSR (Institut elementoorganicheskikh soedineniy AN SSSR)

"Spectra and Structure of Organophosphorus Salts. Salts Con-
 taining the Diphosphinylimide Group"

Moscow, Zhurnal Strukturnoy Khimii, Vol 7, No 3, 1966.
 pp 366-369

Abstract: In studying the structure of salts whose anion con-
 tains the diphosphinylmethinyl group $\begin{array}{c} | \\ \diagup \text{OPCHPO} \diagdown \\ | \end{array}$ it was shown that
 this anion possesses a symmetric structure with equal Po and PC
 bonds whereupon the latter have an increased frequency. It
 appeared of interest to study salts containing the diphosphiny-
 limide group $\begin{array}{c} | \\ \diagup \text{OPNPO} \diagdown \\ | \end{array}$ and differing from the former by the fact
 that the methinyl group in them is replaced by a nitrogen atom,
 and to trace the effect of this substitution on the character of

Card 1/2

UDC: 541.67

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L 05208-67

ACC NR: AF7000755

3

the bonds in the anion. The structure of the salts with the diphosphinylimide group had not been studied before.

Results are presented on the calculation of the frequencies, vibration forms, and partial derivatives from the frequencies on the various parameters for a number of models of an anion containing the diphosphinylimide group. The comparison of the frequencies calculated for these models with the measured frequencies of the K-salt, 0,0',0'',0'''-tetraethylimidopyrophosphate indicates that the salts containing the diphosphinylimide group has a symmetric structure with equalized Po and Pn bonds. The equalization of these bonds permits the assumption on the formation of a single conjugated system of bonds in the limits of the phosphoric pentade which apparently is explained by the symmetry of the diphosphinylimide group. Academician M. I. Kabachnik, Professor L. S. Mayants and G. B. Shaltuper collaborated in the work. Orig. art. has: 1 figure and 1 table. [JPRS: 37,177]

TOPIC TAGS: organic phosphorus compound, chemical bonding, imide

SUB CODE: / SUBM DATE: 05Jun65 / ORIG REF: 009 / OTH REF: 004

Card 2/2 *gl*

ACC NR: AP7011816

SOURCE CODE: UR/0192/66/007/005/0708/0714

OUR

AUTHOR: Matrosov, Ye. I.ORG: Institute of Organoelemental Compounds, Academy of Sciences USSR
(Institut elementoorganicheskikh soedineniy AN SSSR)TITLE: Calculation of characteristic vibrations in spectra of organophosphorus compounds. Vibrations of molecules containing one $P=N$ bond group

SOURCE: Zhurnal strukturnoy khimii, v. 7, no. 5, 1966, 708-714

TOPIC TAGS: spectrum, IR spectrum distortion, organic nitrogen compound

SUB CODE: 07

ABSTRACT: An investigation was made of the infrared spectra of organophosphorus compounds containing an isolated $\text{P}=\text{N}$ bond. A calculation was made of the vibrations of $\text{Cl}_3\text{P}=\text{N}-\text{COCCl}_3$ and $(\text{C}_2\text{H}_5\text{O})_3\text{P}=\text{N}-\text{P}(\text{O})(\text{OC}_2\text{H}_5)_2$, i.e., compounds containing, respectively, acylimide $\text{P}=\text{N}-\text{C}=\text{O}$ or $\text{P}=\text{N}-\text{P}=\text{O}$ groups. On the basis of the calculation it was shown that the earlier established relationship between the content of $\text{P}=\text{N}$ groups in the molecules and the presence in their spectra of an intense absorption band in the region $1290-1415\text{ cm}^{-1}$ was wholly validated, that is, absorption in their region actually corresponds to the vibration of the $\text{P}=\text{N}$ group. In

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07.02

0701

ACC NR: AP7011816

this vibration, in addition to the P=N bond, coordinates of bonds and angles of substituents at the nitrogen atom also participate. An investigation was made of the effect of replacing substituents at the phosphorus and nitrogen atoms for the frequency of the P=N-vibration" with the use of calculated results and literature data. It was shown that replacement of the substituent at the phosphorus atom is only slightly reflected in the frequency of this vibration. Material in the literature on the frequencies of the "P=N vibrations" was compared with the nature of the substituent at the nitrogen. In the spectrum of $(C_2H_5O)_3P=N-P(O)(OC_2H_5)_2$ there are two bands, 859 and 751 cm^{-1} , that can be attributed to the vibration of the isolated P=N bond. It has been found that the "P=N-vibration" is complex: in addition to the P=N bond, many other coordinates also substantially participate in it. The author thanks Academician M. I. Kabachnik for his attention to the work and for valuable observations and G. B. Shaltuper for participating in the discussion. Orig. art. has: 2 figures, 2 formulas and 5 tables. [JPRS: 40,351]

Card 2/2

PINSKER, A.Ye. [Pinsker, A.IE.], kand.tekhn.nauk; MATROSOVA, A.I.

Solubility of carbon disulfide in polyalkyl benzols. Khim.prom.
[Ukr.] no.1:20-22 Ja-Mr '64, (MIRA 17:3)

YUR'YEV, V.A.; LOPATINA, N.I.; ZHAKHOVA, Z.N.; MATROSOVA, A.V.

Enzymatic properties of metamyosin. Biul.eksp.biol.i med. 58
no.7:54-57 J1 '64. (MIRA 18:2)

1. Biokhimi-cheskaya laboratoriya (zav. - dotsent V.A.Yur'yev)
Instituta akusherstva i ginekologii (dir. - prof. M.A.Petrov-
Maslakov) AMN SSSR, Leningrad. Submitted April 5, 1963.

KADYKOV, V.V.; YUR'YEV, V.A.; PRINTSEV, M.D.; MATROSOVA, A.V.

Characteristics of the protein composition of sarcoplasm in various
muscles. Zhur. evol. biokhim. i fiziol. 1 no.3;205-212 My-Je '65.
(MIRA 18:7)

1. Kafedra biokhimii Leningradskogo pediatricheskogo meditsinskogo
instituta.

MATROSOVA, I.A.

Mowing machine for operation at high speeds. Trakt. i selkhozmasht.
32 no.3:36 Mr '62. (MIRA 15:2)

1. GKBS Lyuberetskogo ~~zavoda~~ sel'skokhozyaystvennogo mashinostroye-
niya im. Ukhtomskogo.

(Mowing-machines)

MATROSOVA, I.A., insh.

The KZH-2, 1 mounted single-beam high-speed mower. Mashino-
stroenie no.3:103-105 My-Je '63. (MIRA 16:7)

1. GKBS Lyubertskego zavoda im. Ukhtomskogo.
(Mowing machines)

IVANOV, I.; MATROSOVA, K.; KONONOV, N.

State Bank business and people. Den. i kred. 19 no. 5:49-55 My
'61. (MIRA 14:5)

1. Zamestitel' upravlyayushchego Rostovskoy kontorey Gosudarstvennogo
banka (for Ivanov, Matrosova). 2. Glavnyy bukhgalter Vinitskoy
oblastnoy kontory Gosudarstvennogo banka (for Kononov).
(Rostov Province--Banks and banking)
(Vinitsa Province--Banks and banking)

MATROSOVA, L.G.

In front of the machine and behind the school desk. Zdorov's
8 no.1:18-20 Ja '62. (MIRA 15:3)
(EVENING AND CONTINUATION SCHOOLS)

MATROSOVA, M.F.; TIMASHEVA, Ye.P.

Production control at the Chirchik Electrochemical Combine.

Zav. lab. 30 no.1:115-116 '64.

(MIRA 17:9)

KONDRATOVA, K.G.; KUZOVLEV, A.I.; GUREVICH, E.Ye.; MALEINA, A.P.;
MATROSOVA, N.I.

Rendering cyanide in waste waters harmless with liquid chlorine.
Stal' 24 no.10:946 O '64. (MIRA 17:12)

1. Kosogorskiy metallurgicheskiy zavod.

MATROSOVA, N.S.

Thermoconductometric gas analysers. Khim.prom.no.7:422-425 0-1 '56.
(MLRA 10:1)

1. Opytno-konstruktorskoye byuro avtomatiki Ministerstva khimicheskoy promyshlennosti.

(Heat-Conduction) (Gases--Analysis)

Matrosova, N.S.

AUTHORS: Gukhman, B. S., Matrosova, N. S.

64-8-10/19

TITLE: Portable Electrical Gas Analyzer of the Type $\Pi\Gamma\Phi$ for the Determination of Combustible Gases and Vapors in the Air (Perenosnyy elektricheskiy gazoanalizator tipa $\Pi\Gamma\Phi$ dlya opredeleniya goryuchikh gazov i parov v vozdukh).

PERIODICAL: Khimicheskaya Promyshlennost', 1957, Nr 8, pp. 41-45 (USSR)

ABSTRACT: The gas analyzer $\Pi\Gamma\Phi$ serves for the determination of combustible gases and vapors in the air and was produced in two variants: $\Pi\Gamma\Phi$ 11-54 and $\Pi\Gamma\Phi$ 2-B3T. The device belongs to the type of thermochemical gas analyzers by means of which the thermal effect of the catalytic combustion of the analyzed gas-mixture-component which is heated by means of a platinum wire up to a certain temperature, can be measured. The device was produced for the first time in 1949 and differed from the other analogous devices by the fact that the gas does not trickle through the device and the gas sample is analyzed in a closed chamber. The greatest deflection of the needle of the galvanometer occurs at the moment the current is switched in. In order to carry out the gas analysis according to this maximum deflection it is necessary to guarantee a thermal symmetry in the

Card 1/4

Portable Electrical Gas Analyzer of the Type $\pi\pi\phi$ for the 64-8-10/19
Determination of Combustible Gases and Vapors in the Air

measuring- and comparison chamber. For this purpose the resistances of the platinum wires have to remain equal in the entire temperature range. The construction parameters of the device are determined according to the calculation- and experimental data. The basic characteristic of the gas analyzer with heated wire is: $\Delta t = f(Q)$. Δt is the temperature drop between the wire and the surrounding medium in $^{\circ}\text{C}$, Q - the total heat liberated at the wire in the given current in the time unit, in cal/sec. Here the basic equation for the thermochemical gas analyzers is derived. According to this equation the sensitivity of the device is determined by 4 factors: By the sensitivity of the bridge scheme, the conditions for the heat transfer from the heated wire, the calorimetric constant of the analyzed gas, and the velocity of the catalytic reaction.

The gas analyzer $\pi\pi\phi$ 11-54 is at present produced in portable style with a metal cover which is spraying- and dust proof 102 x 200 x 104 mm, with straps and a weight of 2,5 kg. With the gas analyzer it is possible to determine separately methane and hydrogen, in the case that both are present simultaneously in the gas mixture.

Card 2/4

Portable Electrical Gas Analyzer of the Type $\Gamma \Pi \Phi$ for the
Determination of Combustible Gases and Vapors in the Air

64-8-10/19

The device is furthermore also produced in an explosion-proof style $\Gamma \Pi \Phi$ 2- B3T. The dimensions are the following: 230 x 115 x 137 mm, weight 5,6 kg. It is destined for the analysis of combustible gases and vapors of the first, second, and third category of the groups A, B, and T and can be used in closed chambers of the category B-1 and B-1A (chambers where combustible gases and vapors are separated in such a quantity that explosive mixtures can be produced). Both types were confirmed by the committee for norm, measures, and measuring devices of the Cabinet-Council of the USSR. The first device $\Gamma \Pi \Phi$ 11-54 serves for the determination of methane, hydrogen, and of the benzene

B-70-vapors, the device $\Gamma \Pi \Phi$ 2-B3T - for the analysis of methane, coke gas, benzene B-70-vapors, divinyl, ethylene, propane, ethyl-alcohol-vapors, and of the diethyl ester. The amounts of the measured concentrations can be increased up to the double by dilution with pure air which can be sucked in the ratio 1:1 to the analyzed gas.

The devices were worked out by: M. M. Faynberg, M. M. Smakov, N. I. Pushkarskaya, B. S. Gukhman, N. G. Goryachev,

Card 3/4

Portable Electrical Gas Analyzer of the Type $\Pi\Gamma\Phi$ for the 64-8-10/19
Determination of Combustible Gases and Vapors in the Air

N. K. Prokof'yev, S. S. Temina.

The devices are produced in series by the works of
Khar'kov of the trust Khimelektromontazh (city of Khar'kov).
There are 4 figures, 2 tables.

ASSOCIATION: Experimental-Construction-Office for Automation of the
MKhP (Opytno-konstruktorskoye byuro avtomatiki MKhP).

AVAILABLE: Library of Congress

Card 4/4

MATROSOVA N.S.

GUKIDAN, B.S.; MATROSOVA, N.S.

**Portable electric gas analyzer of the PGP type for the determination
of flammable gases and vapors in the air. Khim. prom. no.8:489-493
D '57. (MIRA 11:2)**

**1. Opytno-konstruktorskoye byuro avtomaticheskoy Ministerstva
khimicheskoy promyshlennosti.
(Gas detectors)**

AUTHORS: Matrosova, M. S., Balakireva, Ye. P., SOV/64-58-4-15/20
Berman, S. I.

TITLE: Thermochemical Gas Analyzer of the Type TKhG-5 (Termokhimicheskiy gazoanalizator tipa TKhG-5)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 4, pp. 253 - 254 (USSR)

ABSTRACT: Thermochemical gas analyzers are produced in two types: in the one type the combustion takes place on a platinum wire which at the same time serves as thermocouple, in the other type a laminated catalyst is employed as well as a thermometer for measuring the heat effect. The second method has a few advantages so that an analyzer of this type, called TKhG - 5, was worked out by the OKBA (Experimental Construction Bureau for Automation). Platinum chloride on an aluminum oxide carrier was used as catalyst. The following apparatus were built among the further modifications: TKhG-5A with a scale 0 - 2% H₂ for the analysis of hydrogen in electrolytic oxygen, TKhG - 5B with a scale of 0 - 1% O₂ for the analysis of oxygen in electrolytic hydrogen, and TKhG-5V with scales 0 - 0,5% O₂ and 0 - 1% O₂ for the analysis of oxygen in generator gas. The error limit of the instrument is given as

Card 1/2

Thermochemical Gas Analyzer of the Type TKnG-5

SOV/ 64-58-4-15/20

3%; the authors give a diagram of this instrument and of the electric circuit with a corresponding description. The principle of measurement is based on the fact that an exothermal reaction is formed by the component of the gas mixture to be analysed, the heat formed being proportional to the amount of substance; the measurements are all carried out automatically. On the basis of the mentioned construction instruments can be produced for the analysis of hydrogen in a sample of industrial gases as well as of CO_2 , SO_2 , NH_3 , CH_4 in the air, etc. There are 2 figures.

ASSOCIATION: Opytno-konstruktorskoye byuro avtomatiki (Experimental Construction Bureau for Automation)

1. Gas analyzers--Performance
2. Gas analyzers--Equipment

Card 2/2

L 11818-65
ACCESSION NR: AR3004143

platinum spiral, heated by an electric current to a predetermined temperature and connected into the circuit of an unbalanced measuring bridge. The article shows the basic electrical diagram of the unit and the gaseous element of the sensor, and describes the unit's principle of operation. The SGG-2 unit is being produced to detect flammable gases and vapors such as methane, hydrogen, acetylene, ethylene, 1,3-butadiene, etc.

Phys. Illustrations: E. V. Vourina

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R032932910013-8

1978 Illustrations, E. Vivurina

SUB CODE: PP, EE

ENCL: 00

2nd 2/2

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R032932910013-8"

DENISOV, G.G.; KOTEL'NIKOV, V.M.; MATROKHIN, N.S.

Effect of volley perforation on the intactness of casing strings.
Nefteprom. delo no.3:22-24 '65. (MIRA 18:10)

1. Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i
gazovoy promyshlennosti.

MATROSOVA, O.P.

SILAKOVA, V.V., kand.med.nauk; MATROSOVA, O.P.

Familial Pelger's nuclear anomaly. Vrach.delo supplement '57:20

(MIRA 11:3)

1. Kafedra propedevticheskoy terapii (sav.-dots. L.I.Korobkov)

Ivanovskogo meditsinskogo instituta.

(LEUCOCYTES)

MATROSOVA, T. F. .

Matrosova, T. F. and Yershov, V. I. "On the problem of treating otogenous sepsis with penicillin", sbornik trudov Leningr. nauch.-issled. in-ta po boleznyam ucha, nosa, gorla i rechi, Vol. IX, 1949, p. 117-20.

SO: U - 3042, 11 March 53, (Letopis "Zhurnal "nykh Statey, No. 7, 1949)

AUTHORS: Kuchina, E. P., Petrosova, T. V. 907/32-24-8-17/45

TITLE: News in Brief (Korotkiye soobshcheniya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 8, pp.958-958 (USSR)

ABSTRACT: E. P. Kuchina of the Kuznetsk Metallurgical Kombinat (Kuznetskiy metallurgicheskiy kombinat) has worked out an ion-exchange method which can determine boron in ore more quickly. This method uses the H-cationite ~~№~~ 1 and can determine as little as 0,1 % boron with an accuracy of $\pm 0,02$ %. The determination requires 1 - 1,5 hours.

T. V. Petrosova of the Laboratory of the Institute for the Analysis of Aluminum Alloys has worked out a new method for determining silicon in alloys in the range of 0,05 - 1,6 % Si. The method is based upon the reduction of ammonium silico-molybdates to molybdenum blue in ferrosulfate solution. In this reaction the silicic acid remains undissociated for a long time if sodium silicate is slowly poured into the hydrochloric acid solution (density - 1,1). After several days a stable complex forms in this solution. The colorimetric determination was carried out using a ~~PH~~-H apparatus with

Card 1/2

News in Brief

NOV/50-24-9-17/47

red filter. The accuracy of the determination is 0.005 - 0.01 .

and 2/1

BUDANOVA, L.M.; MATROSOVA, T.V.

Complexometric method for the determination of zinc in
aluminum alloys. Zav.lab. 27 no.6:661-662 '61. (MIRA 14:6)

(Zinc--Analysis) (Aluminum alloys)

MATROSOVA, T.V.

Photocolorimetric determination of copper with oxalylid hydrazine
Zav. lab. 31 no.1:38-39 '65. (MIRA 1965)

MATROSOVA, T.V.; ZUBKOVA, Z.A.

Determination of silicon in aluminium alloys and hardeners.
Zav. lab. 31 no.8:945-946 '65. (MIRA 18:9)

GOR'KOVA, S.A.; DUNAYEV, V.G.; MATROSOVA, V.R.; NAUMOVA, Ye.K.; STUDENTSOVA, I.A.

Comparative characteristics of the biological and antimicrobial effect of armin and its chlorinated analogue. Nauch. trudy Kaz. gos. med. inst. 14:151-152 '64. (MIRA 18:9)

1. Kafedra mikrobiologii (zav. - dotsent Z.Kh.Karimova), kafedra farmakologii (zav. - dotsent T.V.Raspopova) Kazanskogo meditsinskogo instituta i kafedra organicheskoy khimii (zav. - prof. A.I.Razumov) Kazanskogo khimiko-tekhnologicheskogo instituta.

BREZGUNOV, V.S.; LIPIN, V.N.; MATROSOVA, V.R.; NAUMOVA, Ye.K.

Comparative evaluation of the bactericidal properties of aquargen
and antibiotics in pure microbial cultures and their associations.
Nauch. trudy Kaz. gos. med. inst. 14:121-122 '64.

(MIRA 18:9)

1. Kafedra mikrobiologii (zav. - dotsent Z.Kh.Karimova) i
kafedra obshchey khimii (zav. - dotsent Ye.M.Kozyrev)
Kazanskogo meditsinskogo instituta.

MATROSOVA, V.R.; NAUMOVA, Ye.K.; PUSENKOVA, I.V.

Pharmacological and microbiological characteristics of three
new groups of organophosphorus preparations. Nauch. trudy Kaz.
gos. med. inst. 14:229-230 '64. (MIRA 18:9)

1. Kafedra mikrobiologii (zav. - dotsent Z.Kh.Karimova) i
kafedra farmakologii (zav. - dotsent T.V.Raspopova) Kazan-
skogo meditsinskogo instituta.

VASIL'YEV, A.A.; GERSHMAN, M.B.; VASIL'YEVA, T.A.; Prinimali uchastiye:
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